

## ABSTRACT

QTL analysis on the resistance to Fusarium head blight is performed by using an RI line (RHI population) grown by crossing Russia 6 (two-row, resistant) with H.E.S.4 (six-row, susceptible), an RI line (RI2 population) grown by crossing Harbin 2-row (resistant) with Turkey 6 (susceptible), and a DH line (DHHS population) grown by crossing Haruna Nijo (resistance) with H602 (susceptible). As a result, QTLs are detected on the 2H, 4H and 5H chromosomes in the RHI population, on the 2H, 4H and 6H chromosomes in the RI2 population and on the 2H, 4H and 5H chromosomes in the DHHS population. Furthermore, genetic markers linked to these QTLs (MM314, FM677, FM426, MM1057, MMtgaEatc128, FMgcgEatc 530, FXLRRfor\_XLRRrev119, FMacgEcgt288, HVM67, FMataEagc408, HVM11, Bmag125, k04002, k05042, k03289, HvLOX and k00835) are found out.